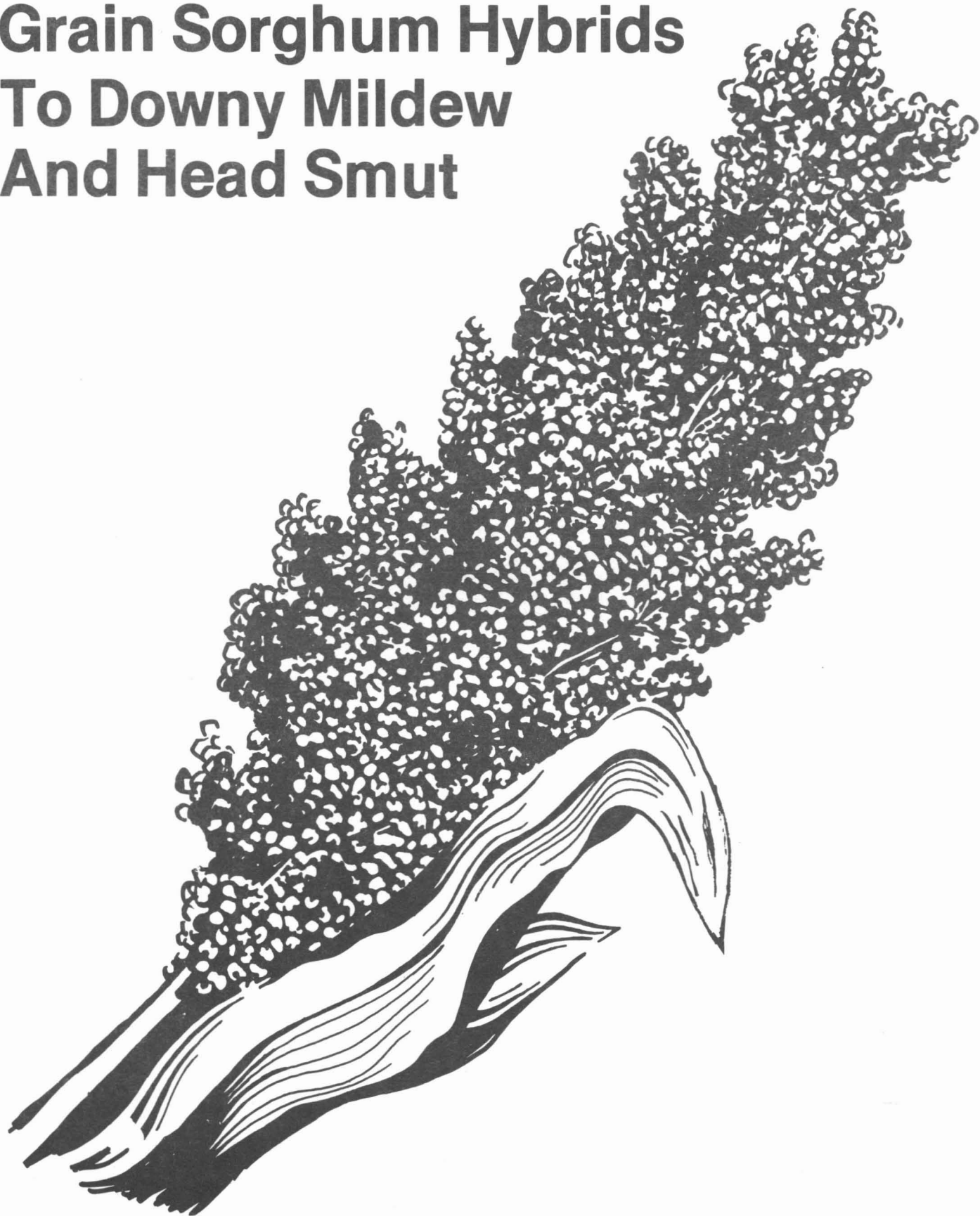


Ratings Of 212 Commercial Grain Sorghum Hybrids To Downy Mildew And Head Smut



ACKNOWLEDGMENTS

Grain Sorghum Producers (1979)

Herbert Blase - Sealy
Edwin Cook - Ganado
Otto Hertel - Berclair
Dan Krenek - Rosenberg
Melvin Marek - Wharton

Texas Agricultural Extension Service

Jose Amador - Weslaco
Larry Barnes - College Station
Robert Berry - Lubbock
Bruce Carr - Bellville
Johnnie Cooper - Rosenberg
Marvin Lesikar - Edna
Charlie Mayes, Jr. - Wharton
Charles Murphey - Bellville
Paul Murphey - Rosenberg
Dave Tiller, Jr. - Wharton
Kenneth White - Goliad

Texas Agricultural Experiment Station

Delroy Collins - College Station
Ralph Leisy - College Station

Grain Sorghum Seed Companies

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Asgrow Seed Company
Browning Seed Company
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DeKalb Ag Research, Inc.
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Pioneer Hi-Bred Int., Inc.
R. C. Mitchell Seed Company
R. C. Young Seed and Grain Company
Richardson Seed Farms
Ring Around Products, Inc.
Star Seed and Grain Corp.
Taylor-Evans Seed Company
Texas Triumph Seed Company
WAC Seed Company

January 1980

RATINGS OF 212 COMMERCIAL GRAIN SORGHUM HYBRIDS
TO DOWNY MILDEW AND HEAD SMUT

C. Wendell Horne, Project Leader
in Plant Sciences and Plant Pathologist,
Texas Agricultural Extension Service

Richard A. Frederiksen, Plant
Pathologist, Texas Agricultural
Experiment Station

Robert W. Toler, Plant Virologist,
Texas Agricultural Experiment
Station

Jerry D. Trampota, Technician II
Texas Agricultural Extension
Service

The Texas A&M University System

AREA OF STATE WHERE INFORMATION IS APPLICABLE

South Texas grain sorghum producers will find this information to be most beneficial because the diseases for which ratings are given occur on a rather predictable basis. The information is just as reliable for producers in other parts of the state where these diseases represent a limiting production factor.

HOW DISEASE RATING INFORMATION SHOULD BE USED

Disease resistance is only one of many characteristics to consider in selecting a grain sorghum hybrid. Yield potential in the local area is the first and most important consideration. County Extension agent demonstrations are a good source of information on yield performance of adapted hybrids. Seed companies also have yield information on hybrids in a given area. Give strong consideration to disease ratings when one of these diseases represents a limiting production factor.

EXPLANATION OF RATINGS

Resistant - Resistant hybrids should experience little damage from the disease organisms considered. Only slight infection by the fungi that cause downy mildew or head smut is to be expected when these organisms are present.

Moderately Resistant - Hybrids showing this designation for a particular disease can be expected to experience some disease development and some loss if the potential for disease is high. Little damage should be expected when the disease potential is moderate to low.

Moderately Susceptible - Hybrids in this range may experience yield loss where the potential for disease is high. Furthermore, growing hybrids of this class in areas of high disease incidence may cause organism populations to build up in soils where the crop is grown.

Susceptible - Susceptible hybrids should be grown only in areas where the potential for disease development is low or absent. If used in areas of high disease potential, substantial losses may occur.

A BRIEF DESCRIPTION OF DISEASES FOR
WHICH DISEASE RATINGS ARE GIVEN

Downy Mildew

Downy mildew has been most severe in South Texas producing areas, but it does occur to some extent in most areas. It is caused by a soil borne fungus that can persist in the soil for several years. When susceptible hybrids are grown in the presence of the fungus, they may cause the soil spore populations to build up to extremely high levels.

Systemically infected plants have striped leaves with white-to-light green bands. A downy type growth can be seen on the lower leaf surface which is further indication of the disease. Plants infected systemically are destined to be sterile and will not produce heads. Later these plants will have shredded leaves as though they had been hit by hail. Spores are liberated from these shredded leaves and fall to the soil.

Growers who have this disease occurring in their field should strongly consider using resistant hybrids. This will help avoid yield loss and prevent excessive buildup of the fungal spores in the soil. No indication of new races attacking resistant varieties of the fungus has ever been found.

Head Smut

Head smut is caused by a soil borne fungus that infects young seedling plants very early in life. The fungus grows systemically in the tissues, and the plant appears normal until the smut structure develops at heading time. The smut observed actually consists of thousands of tiny fungus spores that fall to the soil where they overwinter.

The head smut fungus is capable of changing and developing new races. This has caused problems whereby apparently resistant hybrids become infected. Ratings were made where the old race (race 3) was predominant, but the new race (race 4) did occur. Ratings shown are considered reliable where race 3 occurs, but may run somewhat higher where a high potential for race 4 exists.

Growers who experience problems with head smut should certainly utilize resistant hybrids. Those who experience infection levels of more than five percent on previously resistant hybrids are likely to be dealing with a new race of the fungus. Consult test results from areas where the new races occur for information on the most resistant hybrids.

GRAIN SORGHUM DISEASE RATINGS

<u>Company/Hybrid</u>	<u>Downy Mildew</u>	<u>Head Smut</u>
1. ACCO BRY-93	Susceptible	Susceptible
2. ACCO R-109-A	Susceptible	Moderately resistant
3. ACCO R-920	Susceptible	Susceptible
4. ACCO R-980	Moderately susceptible	Susceptible
5. ACCO R-1014	Resistant	Resistant
6. ACCO R-1019	Susceptible	Moderately susceptible
7. ACCO R-1029-A	Susceptible	Susceptible
8. ACCO R-1090	Susceptible	Susceptible
9. ACCO DR-1035	Resistant	Resistant
10. ACCO DR-1085	Resistant	Resistant
11. ACCO DR-1095	Resistant	Resistant
12. ACCO GR-1018	Susceptible	Susceptible
13. ACCO GR-108	Susceptible	Moderately susceptible
14. ACCO GR-12028	Susceptible	Susceptible
15. ACCO GR-1089	Susceptible	Susceptible
16. ACCO GR-1138	Susceptible	Moderately susceptible
17. ACCO GR-1288	Susceptible	Susceptible
18. ACCO GR ² -1100	Moderately susceptible	Moderately resistant
19. ACCO GR ² -1200	Moderately susceptible	Susceptible
20. Asgrow Bug Off	Susceptible	Moderately susceptible

<u>Company/Hybrid</u>	<u>Downy Mildew</u>	<u>Head Smut</u>
21. Asgrow Capitan	Susceptible	Resistant
22. Asgrow Corral	Susceptible	Moderately susceptible
23. Asgrow Mustang	Susceptible	Resistant
24. Asgrow Ranchero	Susceptible	Resistant
25. Asgrow Roundup	Resistant	Susceptible
26. Asgrow Topaz	Resistant	Moderately resistant
27. Browning Challenger	Susceptible	Moderately resistant
28. Browning Challenger Plus	Resistant	Resistant
29. Browning Golden Victory GBR	Moderately susceptible	Moderately susceptible
30. Browning Spirit of 76	Moderately resistant	Susceptible
31. Browning Yellow Martin GBR	Susceptible	Moderately resistant
32. Coffey 644-G	Susceptible	Moderately susceptible
33. Coffey 728-G	Moderately susceptible	Moderately resistant
34. Coffey 766-G	Moderately susceptible	Resistant
35. Coffey 750-D	Resistant	Susceptible
36. Coker 7605	Susceptible	Moderately susceptible
37. Coker 7638	Susceptible	Moderately resistant
38. Coker 7675	Resistant	Resistant
39. Coker 7707	Susceptible	Moderately susceptible
40. Coker 7723	Resistant	Resistant

<u>Company/Hybrid</u>	<u>Downy Mildew</u>	<u>Head Smut</u>
41. Conlee Bounty	Resistant	Susceptible
42. Conlee Grande	Resistant	Resistant
43. Conlee Quickie	Susceptible	Susceptible
44. Conlee Rawhide	Susceptible	Moderately susceptible
45. Conlee Tophand	Susceptible	Moderately resistant
46. Conlee Tophand II	Resistant	Resistant
47. Conlee Tophand TA	Resistant	Resistant
48. Co-op SG-28-DMR	Resistant	Moderately resistant
49. Co-op SG-39-DMR	Resistant	Resistant
50. Crosbyton-Penta 5550	Susceptible	Susceptible
51. Crosbyton-Penta 5580	Resistant	Moderately resistant
52. Crosbyton-Penta 5650	Susceptible	Moderately resistant
53. Crosbyton-Penta 5690	Resistant	Resistant
54. Crosbyton-Penta 5775	Resistant	Resistant
55. Crosbyton-Penta 5850	Susceptible	Moderately susceptible
56. Crosbyton-Penta 5880	Resistant	Resistant
57. Crosbyton-Penta 5882	Resistant	Moderately resistant
58. DeKalb D-42a+	Resistant	Moderately resistant
59. DeKalb D-42y+	Resistant	Resistant
60. DeKalb D-54	Resistant	Resistant
61. DeKalb D-55	Resistant	Moderately resistant

<u>Company/Hybrid</u>	<u>Downy Mildew</u>	<u>Head Smut</u>
62. DeKalb D-59+	Resistant	Moderately resistant
63. DeKalb D-60	Resistant	Resistant
64. DeKalb D-61	Resistant	Susceptible
65. Douglas King 724-G	Susceptible	Moderately susceptible
66. Douglas King 755-G	Susceptible	Moderately resistant
67. Douglas King 762-DR	Resistant	Moderately resistant
68. Funks G-393	Susceptible	Susceptible
69. Funks G-399	Moderately resistant	Susceptible
70. Funks G-404	Moderately susceptible	Moderately resistant
71. Funks G-499-GBR	Susceptible	Moderately susceptible
72. Funks G-520-GBR	Susceptible	Susceptible
73. Funks G-522-A	Susceptible	Moderately resistant
74. Funks G-522-DR	Resistant	Resistant
75. Funks G-550	Resistant	Resistant
76. Funks G-611	Resistant	Resistant
77. Funks G-623-GBR	Susceptible	Moderately susceptible
78. Funks G-722-DR	Resistant	Resistant
79. GSA E-110	Susceptible	Susceptible
80. GSA 1100	Susceptible	Moderately susceptible
81. GSA 1180	Resistant	Moderately susceptible
82. GSA 1210-A	Susceptible	Susceptible

	<u>Company/Hybrid</u>	<u>Downy Mildew</u>	<u>Head Smut</u>
83.	GSA 1212	Susceptible	Moderately resistant
84.	GSA 1290	Resistant	Moderately resistant
85.	GSA 1310	Moderately susceptible	Moderately susceptible
86.	GSA 1310-A	Moderately susceptible	Moderately resistant
87.	GSA 1330	Resistant	Moderately resistant
88.	GSA 1370	Moderately susceptible	Moderately resistant
89.	GSA L-141	Resistant	Resistant
90.	GSA Little Joe A	Moderately susceptible	Moderately susceptible
91.	GSA M-125	Moderately susceptible	Moderately resistant
92.	GSA ML-135	Susceptible	Resistant
93.	GSA ML-136	Susceptible	Moderately susceptible
94.	GSA ML-136-A	Moderately susceptible	Moderately resistant
95.	Mitchell Stand King D-T	Resistant	Resistant
96.	Mitchell Stand King D-T-Y	Resistant	Moderately susceptible
97.	Mitchell Stand King Y	Susceptible	Moderately resistant
98.	Mitchell Stand King Y-G	Moderately susceptible	Moderately resistant
99.	Mitchell Stand Master	Moderately resistant	Susceptible
100.	NC+ 160	Susceptible	Moderately susceptible

<u>Company/Hybrid</u>	<u>Downy Mildew</u>	<u>Head Smut</u>
101. NC+ 161	Susceptible	Susceptible
102. NC+ 168	Susceptible	Moderately susceptible
103. NC+ 170	Susceptible	Moderately susceptible
104. NC+ 171	Susceptible	Moderately susceptible
105. NC+ 172	Susceptible	Moderately resistant
106. NC+ 174	Resistant	Resistant
107. Northrup King 233	Resistant	Susceptible
108. Northrup King 262	Resistant	Resistant
109. Northrup King 266	Resistant	Resistant
110. Northrup King 2189	Resistant	Moderately resistant
111. Northrup King 2650	Resistant	Resistant
112. Northrup King 2670	Resistant	Resistant
113. Northrup King Savanna 5	Resistant	Resistant
114. PAG 3387	Moderately susceptible	Moderately susceptible
115. PAG 4432	Resistant	Susceptible
116. PAG 4433	Moderately resistant	Susceptible
117. PAG 4474	Moderately susceptible	Susceptible
118. PAG 4488	Resistant	Susceptible
119. PAG 5504	Resistant	Resistant
120. PAG 5514	Susceptible	Moderately susceptible
121. PAG 6657	Resistant	Moderately susceptible

<u>Company/Hybrid</u>	<u>Downy Mildew</u>	<u>Head Smut</u>
122. PAG 6658	Resistant	Moderately resistant
123. PAG 6662	Moderately susceptible	Moderately susceptible
124. Pioneer 8199	Resistant	Moderately resistant
125. Pioneer 8244	Resistant	Resistant
126. Pioneer 8308 B	Resistant	Moderately susceptible
127. Pioneer 8311	Resistant	Moderately susceptible
128. Pioneer 8324	Resistant	Moderately resistant
129. Pioneer 8501	Resistant	Moderately susceptible
130. Richardson 126-A	Moderately susceptible	Susceptible
131. Richardson Y-112-A	Susceptible	Moderately susceptible
132. Richardson Y-303-A	Moderately susceptible	Resistant
133. Ring Around 747	Resistant	Moderately resistant
134. Ring Around 787	Resistant	Resistant
135. Ring Around 807	Moderately susceptible	Susceptible
136. Ring Around 810	Susceptible	Susceptible
137. Star Seed & Grain 9-Y	Susceptible	Susceptible
138. Star Seed & Grain 29-Y	Susceptible	Moderately susceptible
139. Star Seed & Grain 30-Y	Resistant	Moderately resistant
140. Star Seed & Grain 61-Y	Moderately susceptible	Moderately susceptible

	<u>Company/Hybrid</u>	<u>Downy Mildew</u>	<u>Head Smut</u>
141.	Taylor-Evans Bird-A-Boo	Susceptible	Susceptible
142.	Taylor-Evans Champ	Susceptible	Moderately susceptible
143.	Taylor-Evans Dinero	Resistant	Resistant
144.	Taylor-Evans Grainmaster R	Moderately susceptible	Resistant
145.	Taylor-Evans Hondo	Resistant	Resistant
146.	Taylor-Evans Total D	Resistant	Susceptible
147.	Taylor-Evans Total R	Moderately susceptible	Moderately susceptible
148.	Taylor-Evans 66-B	Resistant	Moderately resistant
149.	Taylor-Evans 66-R	Moderately resistant	Resistant
150.	Taylor-Evans 77-A	Resistant	Moderately susceptible
151.	Taylor-Evans 88-A	Moderately susceptible	Resistant
152.	Taylor-Evans Y-44-R	Susceptible	Moderately susceptible
153.	Taylor-Evans Y-45	Susceptible	Susceptible
154.	Taylor-Evans Y-101-D	Resistant	Susceptible
155.	Taylor-Evans Y-101-R	Moderately susceptible	Moderately susceptible
156.	Taylor-Evans Y-111	Resistant	Moderately susceptible
157.	Texas Triumph Two 50-D	Resistant	Moderately resistant
158.	Texas Triumph Two 52-Y-G	Susceptible	Moderately susceptible
159.	Texas Triumph Two 62-Y	Susceptible	Moderately resistant

	<u>Company/Hybrid</u>	<u>Downy Mildew</u>	<u>Head Smut</u>
160.	Texas Triumph Two 62-Y-G	Susceptible	Moderately susceptible
161.			
162.	Texas Triumph Two 75-BRG	Susceptible	Moderately susceptible
163.	Texas Triumph T-9110	Resistant	Resistant
164.	WAC 624-G	Susceptible	Moderately susceptible
165.	WAC 652-G	Susceptible	Moderately susceptible
166.	WAC 692	Susceptible	Moderately susceptible
167.	WAC 692-G	Susceptible	Moderately resistant
168.	WAC 692-R	Resistant	Resistant
169.	WAC 694	Susceptible	Moderately susceptible
170.	WAC 694-G	Susceptible	Moderately resistant
171.	WAC 694-GS	Susceptible	Moderately susceptible
172.	WAC 694-R	Resistant	Moderately susceptible
173.	WAC D-701-G	Resistant	Moderately resistant
174.	WAC 710-DR	Resistant	Resistant
175.	WAC 710-G	Susceptible	Moderately resistant
176.	WAC 715-DR	Resistant	Resistant
177.	WAC 715-G	Moderately susceptible	Susceptible
178.	WAC 715-GS	Moderately susceptible	Susceptible

	<u>Company/Hybrid</u>	<u>Downy Mildew</u>	<u>Head Smut</u>
179.	WAC Tropical W	Resistant	Resistant
180.	Warner 55-T	Moderately susceptible	Susceptible
181.	Warner 545-T	Resistant	Moderately resistant
182.	Warner 561-T	Susceptible	Susceptible
183.	Warner 564-T	Resistant	Moderately resistant
184.	Warner 601-T	Susceptible	Susceptible
185.	Warner 664-T	Susceptible	Susceptible
186.	Warner 655-T	Susceptible	Moderately susceptible
187.	Warner 666-T	Resistant	Moderately susceptible
188.	Warner 744-DR	Resistant	Moderately susceptible
189.	Warner 832	Resistant	Resistant
190.	Warner 839-DR	Resistant	Resistant
191.	Warner 839-T	Susceptible	Susceptible
192.	Warner 840-DR	Resistant	Resistant
193.	Warner 851-DR	Resistant	Resistant
194.	Warner 869-T	Moderately susceptible	Susceptible
195.	Young Early Oro	Susceptible	Susceptible
196.	Young Early Oro G	Susceptible	Susceptible
197.	Young Oro	Susceptible	Resistant
198.	Young Oro DR-II	Resistant	Resistant
199.	Young Oro-4390	Susceptible	Moderately susceptible
200.	Young Oro-4390 Xtra	Resistant	Resistant

<u>Company/Hybrid</u>	<u>Downy Mildew</u>	<u>Head Smut</u>
201. Young Oro-G	Susceptible	Moderately resistant
202. Young Oro-Y	Susceptible	Moderately susceptible
203. Young Oro-Recio	Susceptible	Susceptible
204. Young Oro-T	Susceptible	Moderately susceptible
205. Young Oro-T-G	Moderately susceptible	Susceptible
206. Young Oro Xtra	Resistant	Moderately resistant
207. Young Oro-G Xtra	Resistant	Resistant
208. Young Oro-T Xtra	Resistant	Moderately resistant
209. Young Oro-W	Susceptible	Susceptible
210. Young Oro-W Xtra	Resistant	Resistant
211. Young Oro-Y-G	Susceptible	Susceptible
212. Young Oro-Y Xtra	Resistant	Resistant

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